

SHARP**SERVICE MANUAL**

SE01LC24LE210

Issued: 11th February 2011**LED LCD COLOUR TELEVISION**

DVB-T / DVB-C (HDTV), PAL B/G, I / SECAM B/G, D/K, L/L' SYSTEM COLOUR TELEVISION


MODEL
LC-24LE210EH
OUTLINE

This model is based on the LC-24LE210E and partially modified for a defined Hotel Mode.

For the contents not covered in this Service Manual, accordingly, please refer to the LC-24LE210E Service Manual (No. SE00LC24LE210).

In the interests of user safety (required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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SHARP CORPORATION

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The contents are subject to change without notice.

OUTLINE AND DIFFERENCES FROM BASE MODEL

OUTLINE

This model is based on the LC-24LE210E and partially modified for a defined Hotel Mode. This Hotel mode only works in case some signal appears through HDMI 1 terminal. In this condition the functionality of Remote Control is limited.

For the contents not covered in this Service Manual, accordingly, please refer to the LC-24LE210E Service Manual (No. SE00LC24LE210).

DIFFERENCES FROM BASE MODEL

1. The only change for this derivative model is the specific software version ("24LE210EHE_v1.0_PANEL_CMI_BOARD_N1" or upper.)
2. In case IC1007 is replaced, proceed to update the software to the above detailed.

Ref. No.	Description	LC-24LE210E	LC-24LE210EH	Note
PRINTED WIRING BOARDS ASSEMBLIES				
-	MAIN / LED Unit Set	DSETUF639WE06	DSETUF639WE11	Software changed
CABINET & MECHANICAL PARTS				
-	Labels set	DLAB-D014WE01	DLAB-D871WE01	Labels set changed

IMPORTANT SERVICE SAFETY PRECAUTION

Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

CAUTION: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE REPLACE ONLY WITH SAME TYPE F101 (T2.5AH / 250V)

BEFORE RETURNING THE RECEIVER (Fire & Shock Hazard)

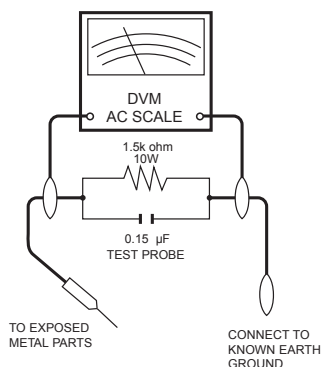
Before returning the receiver to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched, and check that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulation materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

- Plug the AC cord directly into a 220~240 volt AC outlet. (Do not use an isolation transformer for this test).
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15 μ F capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to an earth ground.
 - A true RMS reading multimeter should be used for this test, especially where the equipment uses a switch mode power supply which may result in very non-sinusoidal leakage current.
 - Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.

All checks must be repeated with the AC cord plug connection reversed. (If necessary, a nonpolarized adaptor plug must be used only for the purpose of completing these checks.)

Any reading of 1.05V peak (this corresponds to 0.7 mA. peak AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the monitor to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in LCD television have special safety-related characteristics. These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠".

For continued protection, replacement parts must be identical to those used in the original circuit. The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

PRECAUTIONS FOR USING LEAD-FREE SOLDER

1 Employing lead-free solder

"ALL PWB" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

Example:

LFa

Sn-Ag-Cu

Indicates lead-free solder of tin, silver and copper.

LFn

Sn-Ag-Ni

Indicates lead-free solder of tin, silver and nickel.

2 Using lead-free wire solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldering bit, contact our service station or service branch in your area.

3 Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is about 220°C which is higher than the conventional lead solder by 40°C, and as it has poor solder wettability, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be exceeded, remove the bit from the PWB as soon as you confirm the steady soldering condition.

Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to turn on and off the power of the bit as required.

If a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

Be careful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing.

Part No.	★	Description	Code
ZHNDai123250E	J	φ0.3mm 250g(1roll)	BL
ZHNDai126500E	J	φ0.6mm 500g(1roll)	BK
ZHNDai12801KE	J	φ1.0mm 1kg(1roll)	BM

END OF LIFE DISPOSAL



Attention: Your product is marked with this symbol. It means that used electrical and electronic products should not be mixed with general household waste. There is a separate collection system for these products.

A. Information on Disposal for Users (private households)

1. In the European Union

Attention: If you want to dispose of this equipment, please do not use the ordinary dust bin!

Used electrical and electronic equipment must be treated separately and in accordance with legislation that requires proper treatment, recovery and recycling of used electrical and electronic equipment.

Following the implementation by member states, private households within the EU states may return their used electrical and electronic equipment to designated collection facilities free of charge*. In some countries* your local retailer may also take back your old product free of charge if you purchase a similar new one.

*) Please contact your local authority for further details.

If your used electrical or electronic equipment has batteries or accumulators, please dispose of these separately beforehand according to local requirements.

By disposing of this product correctly you will help ensure that the waste undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health which could otherwise arise due to inappropriate waste handling.

2. In other Countries outside the EU

If you wish to discard this product, please contact your local authorities and ask for the correct method of disposal.

For Switzerland: Used electrical or electronic equipment can be returned free of charge to the dealer, even if you don't purchase a new product. Further collection facilities are listed on the homepage of www.swico.ch or www.sens.ch.

B. Information on Disposal for Business Users

1. In the European Union

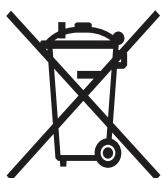
If the product is used for business purposes and you want to discard it:

Please contact your SHARP dealer who will inform you about the take-back of the product. You might be charged for the costs arising from take-back and recycling. Small products (and small amounts) might be taken back by your local collection facilities.

For Spain: Please contact the established collection system or your local authority for take-back of your used products.

2. In other Countries outside the EU

If you wish to discard of this product, please contact your local authorities and ask for the correct method of disposal.



Pb

The battery supplied with this product contains traces of Lead.

For EU: The crossed-out wheeled bin implies that used batteries should not be put to the general household waste! There is a separate collection system for used batteries, to allow proper treatment and recycling in accordance with legislation. Please contact your local authority for details on the collection and recycling schemes.

For Switzerland: The used battery is to be returned to the selling point.

For other non-EU countries: Please contact your local authority for correct method of disposal of the used battery.

SERVICE ADJUSTMENTS

2. Entering and exiting the adjustment process mode. Exclusive method for this Hotel mode.

1. Entering / exiting the adjustment process mode manually.

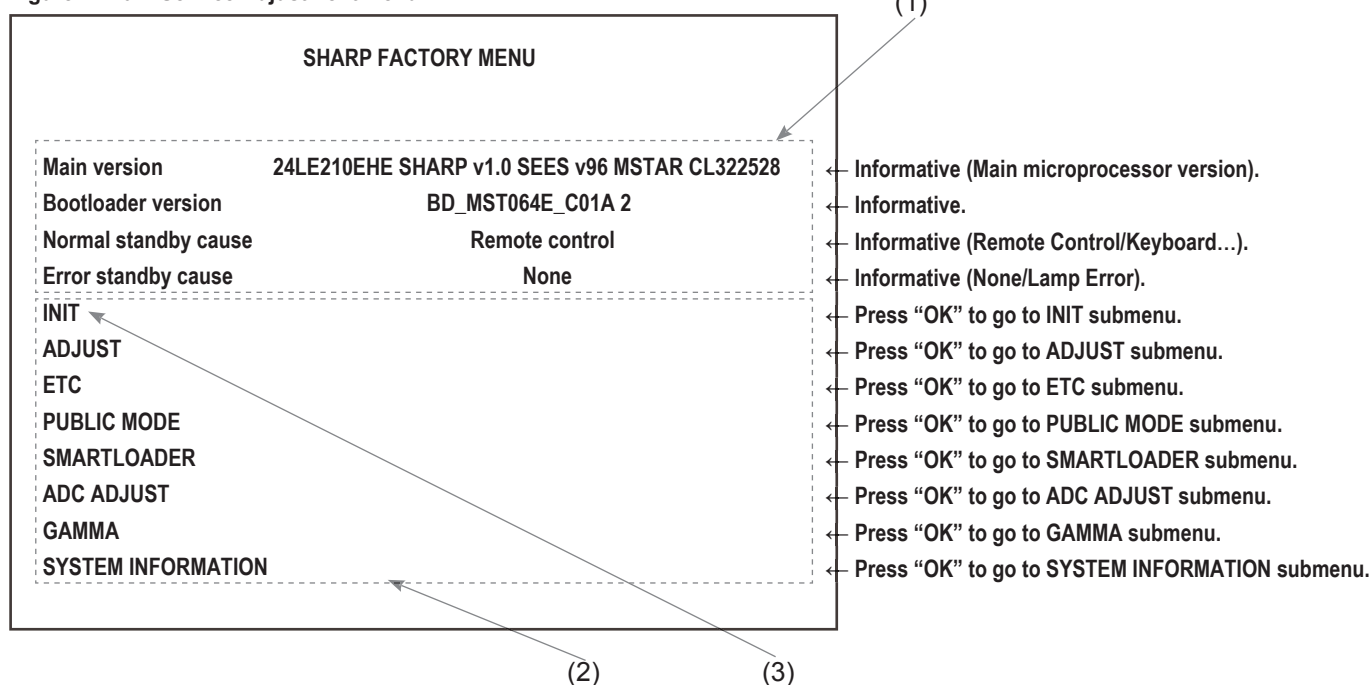
0. Connect a HDMI source through "HDMI 1" terminal (through "HDMI 2" does not work.) and switch it on.
1. Once the TV is on, unplug the AC power cord.
2. Press and hold "V+" and "→" keys, simultaneously, and then plug the AC power cord.
3. A password will be requested. Introduce "0027".
4. "PUBLIC MODE" menu appears on the screen.
5. Press cursor ▼/▲ until selecting "HOTEL MODE", then set it to OFF.
6. Press cursor ▼ until selecting "EXECUTE", then press OK.
7. Switch OFF and ON the TV set.
8. Now the TV is in normal standard operation, all the features are available and it may be serviced without any external signal device.

2. Once the TV has been serviced, activate again the Hotel mode by restoring the factory default values.

1. Press the MENU key.
2. Press cursor ▼/▲ until selecting "OPTION" submenu.
3. Press cursor ▼/▲ until selecting "RESTORE FACTORY DEFAULT" and confirm selecting "YES".

4. Description of display

Figure 1: Main Service Adjustment Menu



No.	Description	Display specification
(1)	Service Information	Current Software version and others.
(2)	Item name	Submenus to be checked or adjusted (by pressing "OK" button)
(3)	Factory init and Inch setting	Are shown on INIT submenu

PARTS LISTING

REPLACEMENT PARTS

Replacement parts which have special safety characteristics are identified in this manual.
Electrical components having such features are identified by * in the Replacement Parts Listing.

The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended is not permitted.

Replacement parts not shown in this service manual may create shock fire, or other hazards.

HOW TO ORDER REPLACEMENT PARTS

To have your order completed promptly and correctly please supply the following information.

- | | | |
|-----------------|-------------|-------------|
| 1. MODEL NUMBER | 2. REF. NO. | 3. PART NO. |
| 4. DESCRIPTION | 5. CODE | 6. QUANTITY |

MARK *: SPARE PARTS		DELIVERY SECTION			
REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
LC-24LE210EH PRINTED WIRING BOARDS					
DSETUF639WE11	MAIN/LED UNIT LC24LE210EH		S	BW	BF
LC-24LE210EH ACCESSORIES					
DLAB-D871WE01	LABELS SET LC24LE210EH		S	--	--



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